

WHAT IS CLAIMED IS:

1. A method of validating a reservation for an airline flight, in order to eliminate the need for paper tickets, said method comprising the steps of:

making a reservation for a particular airline flight for a particular individual without issuing a paper ticket to the individual;

storing reservation data, which identifies the individual and the particular airline flight for which the reservation has been made, in a reservation data storage area of a central data bank;

transmitting personal identification information, which is obtained from the individual at a selected location in an airline terminal, to verify the reservation for the particular airline flight, by accessing the reservation data stored in the central data bank, and effect automatic validation at the selected location to permit the individual to board the flight without requiring a paper ticket, whereby access to airline flights can be effected without the need for issuing a paper ticket to the participating individual;

storing information in the central data bank indicating that the individual has checked baggage to be carried by the particular airline flight when the individual checks baggage at the airline terminal prior to boarding the airline flight;

storing information in the central data bank for each individual who boards the particular airline flight indicating that the individual has boarded; and

comparing the information in the central data bank which identifies individuals who have checked baggage for the particular airline flight with information in the central data bank which identifies individuals that have boarded the particular airline flight to determine whether any individual who has checked baggage has not boarded, before the particular airline flight departs.

2. A method of validating a reservation as defined in claim 1, further comprising the steps of:

creating in the central data bank an airline flight record

which identifies all individuals holding reservations for a particular airline flight, said airline flight record further including an indication whether an individual listed for the particular airline flight has checked baggage for the flight and  
5 an indication whether said individual has boarded the flight; and

updating said airline flight record when said central data bank receives information that an individual has checked baggage and when that individual has boarded the airline flight.

3. A method of validating a reservation as defined in  
10 claim 1, further comprising the step of:

creating in the central data bank a passenger record for an individual who makes a reservation for an airline flight, said passenger record including reservation fields each relating to a respective flight for which said individual has made a flight reservation, each reservation field including information indicating a flight number, a flight departure date, a flight departure time, and a gate number for the flight.

4. A method of validating a reservation as defined in claim 3, wherein said passenger record further includes individual profile information, including the name of the individual and special needs of the individual.

5. A method of validating a reservation as defined in claim 4, wherein said special needs include the need for special assistance in boarding.

25 6. A method of validating a reservation as defined in claim 4, wherein said special needs include special diet requirements.

7. A method of validating a reservation as defined in claim 1, further comprising the step of:

30 creating in the central data bank a passenger record for an individual who makes a reservation for an airline flight, said passenger record including at least the name of the individual and graphic data identifying the individual.

35 8. A method of validating a reservation as defined in claim 7, wherein said graphic data represents a photo of said individual.

9. A method of validating a reservation as defined in claim

0 15 20 25 30 35

7, wherein said graphic data is fingerprint identifying data of said individual.

10. A method of validating a reservation as defined in claim 7, wherein said graphic data is retina scan identifying data of said individual.

5  
11. A method of validating a reservation as defined in claim 1, further including the step of creating in the central data bank a passenger record for an individual who makes a reservation for an airline flight, and wherein said step of storing information in said central data bank indicating that the individual has checked baggage includes storing in the passenger record of the individual claim check numbers of baggage tags attached to baggage which is checked by the individual.

10  
12. A method of validating a reservation as defined in claim 11, wherein said claim check numbers are read from bar codes on the baggage tags using a bar code reader and transmitted from said airline terminal to said central data bank.

20  
13. A method of validating a reservation for an airline flight, in order to eliminate the need for paper tickets, said method comprising the steps of:

making a reservation for a particular airline flight for a particular individual without issuing a paper ticket to the individual;

25  
storing reservation data, which identifies the individual and the particular airline flight for which the reservation has been made, in a reservation data storage area of a central data bank;

30  
creating in the central data bank a passenger record for an individual who makes a reservation for an airline flight, said passenger record including reservation fields each relating to a respective flight for which said individual has made a flight reservation, each reservation field including information indicating a flight number, a flight departure date, a flight departure time, and a gate number for the flight; and

35  
transmitting personal identification information, which is obtained from the individual at a selected location in an airline terminal, to verify the reservation for the particular airline

flight, by accessing the reservation data stored in the central data bank, and effect automatic validation at the selected location to permit the individual to board the flight without requiring a paper ticket, whereby access to airline flights can be effected without the need for issuing a paper ticket to the participating individual;

wherein said passenger record further includes individual profile information, including the name of the individual and special needs of the individual.

10 14. A method of validating a reservation as defined in claim 13, wherein said special needs include the need for special assistance in boarding.

15. A method of validating a reservation as defined in claim 13, wherein said special needs include special diet requirements.

16. A method of validating a reservation for an airline flight, in order to eliminate the need for paper tickets, said method comprising the steps of:

20 making a reservation for a particular airline flight for a particular individual without issuing a paper ticket to the individual;

25 storing reservation data, which identifies the individual and the particular airline flight for which the reservation has been made, in a reservation data storage area of a central data bank;

creating in the central data bank a passenger record for an individual who makes a reservation for an airline flight, said passenger record including at least the name of the individual and graphic data identifying the individual; and

30 transmitting personal identification information, which is obtained from the individual at a selected location in an airline terminal, to verify the reservation for the particular airline flight, by accessing the reservation data stored in the central data bank, and effect automatic validation at the selected location to permit the individual to board the flight without requiring a paper ticket, whereby access to airline flights can be effected without the need for issuing a paper ticket to the

participating individual.

17. A method of validating a reservation as defined in claim 16, wherein said graphic data represents a photo of said individual.

5 18. A method of validating a reservation as defined in claim 16, wherein said graphic data is fingerprint identifying data of said individual.

10 19. A method of validating a reservation as defined in claim 16, wherein said graphic data is retina scan identifying data of said individual.

10 20. A method for validating a reservation for an airline flight, in order to eliminate the need for paper tickets, said method comprising the steps of:

making a reservation for a particular airline flight for a particular individual who has a reusable personal identification card having stored thereon identification information corresponding to the individual but no specific reservation or airline flight information;

20 25 storing reservation data, which identifies the individual and the particular airline flight for which the reservation has been made, in a reservation data storage area of a central data bank, including creating in the central data bank a passenger record for an individual who makes a reservation for an airline flight, said passenger record including reservation fields each relating to a respective flight for which said individual has made a flight reservation, each reservation field including information indicating a flight number, a flight departure date, a flight departure time, and a gate number for the flight;

30 35 reading the personal identification card of the individual at a selected location in an airline terminal to verify the reservation for the particular airline flight, by accessing the reservation data in the passenger record of the individual stored in the central data bank, and effect automatic validation at the selected location to permit the individual to board the airline flight without requiring a paper ticket; and

issuing a boarding pass to the individual to allow the

individual to board the airline flight without presenting an airline ticket after the personal identification card is read and the reservation has been verified.

21. A method of validating a reservation as defined in  
5 claim 20, wherein said personal identification card is read at said airline terminal by a remote computer terminal, which displays reservation information accessed from a reservation field in said passenger record when said passenger identification card is read.

10 22. A method of validating a reservation as defined in claim 21, wherein each reservation field in a passenger record further includes seat assignment information.

23. A method of validating a reservation as defined in claim 21, further including the steps of:

20 creating in said central data bank a flight seat assignment record which lists each passenger for which a reservation has been made for a particular flight, the numbers of the seats on the flight and an indication of each seat assigned to a passenger;

25 responding to passenger identification information read from a passenger's identification card at said remote computer terminal by accessing said flight seat assignment record of an airline flight for which said passenger has a reservation;

25 responding to a request from said passenger, inputted through said remote computer terminal, to select a seat for said flight by causing said remote computer terminal to display seat information which identifies seats on said flight which are available for assignment;

30 updating said flight seat assignment record, in response to receipt of seat selection information inputted through said remote computer terminal by said passenger, to show that a selected seat has been assigned to said passenger.

35 24. A method of validating a reservation as defined in claim 23, wherein said seat information displayed by said remote terminal is in the form of a pattern of the airplane to be used for the airline flight with only available seat numbers provided on the pattern at the locations of the available seats.

5        25. A method of validating a reservation as defined in  
claim 23, further including the step of responding to a request,  
inputted through said remote computer terminal by a passenger, to  
relinquish a seat already assigned to that passenger, by updating  
seat assignment record in said central data bank to indicate that  
the relinquished seat is available for assignment.

10        26. A method of validating a reservation as defined in  
claim 25, further including the step of inhibiting the issuing of  
a boarding pass to an individual until said seat assignment record  
in said central data bank indicates that the individual has been  
assigned a seat.

15        27. A method of validating a reservation as defined in  
claim 20, wherein a passenger record in said central data bank  
also includes frequent flier information, for individuals who are  
a member of an airline frequent flier program, including a current  
record of frequent flier miles accumulated by the individual.

20        28. A method of validating a reservation as defined in  
claim 27, further including the steps of:

25        selling a product to an individual who is a member of an  
airline frequent flier program for a specified cost;

30        accessing the passenger record of the individual in said  
central data bank; and

35        debiting the current record of frequent flier miles by a  
number of miles equal to the specified cost of said product to pay  
for the product, so that the individual may purchase the product  
without tendering cash.

40        29. A method of validating a reservation as defined in  
claim 28, wherein said product is a beverage sold on an airplane.

45        30. A method of validating a reservation as defined in  
claim 28, wherein said product is a publication sold on an  
airplane.

50        31. A method of validating a reservation as defined in  
claim 28, wherein said product is food sold on an airplane.

55        32. A method of validating a reservation as defined in  
claim 27, further including the steps of:

60        selling a service to an individual who is a member of an

airline frequent flier program for a specified cost;

accessing the passenger record of the individual in said central data bank; and

debiting the current record of frequent flier miles by a number of miles equal to the specified cost of said service to pay for the service, so that the individual may purchase the service without tendering cash.

33. A method of validating a reservation as defined in claim 32, wherein said service is providing a telephone connection between the individual while riding in an airplane and a third party located outside the airplane.

34. A method of validating a reservation as defined in claim 32, wherein said service is providing a telephone connection between the individual while riding in an airplane and a third party located in the same airplane.

35. A method of validating a reservation as defined in claim 32, wherein said service is providing a telephone connection between the individual while in the airline terminal and a third party located outside the airline terminal.

36. A method of validating a reservation as defined in claim 32, wherein said service is providing a telephone connection between the individual through the remote computer terminal at the airline terminal and a third party located outside the airline terminal.

37. A method of validating a reservation as defined in claim 32, wherein said service is providing a video display of data for viewing by the passenger at his or her seat on an airplane.

38. A method of validating a reservation as defined in claim 37, wherein said video display of data is a real-time video image of another passenger on the airplane.

39. A method of validating a reservation as defined in claim 37, wherein said video display of data is a video game.

40. A method of validating a reservation as defined in claim 39, wherein said video game is displayed simultaneously at plural seats so that at least two passengers may participate in

the video game at the same time.

41. A method of validating a reservation as defined in claim 40, wherein said video game is a bingo game run by the airline.

5 42. A method of validating a reservation as defined in claim 40, wherein said video game is a card game.

43. A method of validating a reservation as defined in claim 40, wherein said video game is a board game.

10 44. A method of validating a reservation as defined in claim 32, wherein said service is providing a selected audio program to a passenger at his or her seat during an airline flight.

15 45. A method of validating a reservation as defined in claim 32, wherein said service is renting equipment to a passenger for use at his or her seat during an airline flight.

20 46. A method of validating a reservation as defined in claim 20, further including the steps of:

25 storing information in the central data bank indicating that the individual has checked baggage to be carried by the particular airline flight when the individual checks baggage at the airline terminal prior to boarding the airline flight;

30 35 storing information in the central data bank for each individual who boards the particular airline flight indicating that the individual has boarded; and

35 40 comparing the information in the central data bank which identifies individuals who have checked baggage for the particular airline flight with information in the central data bank which identifies individuals that have boarded the particular airline flight to determine whether any individual who has checked baggage has not boarded, before the particular airline flight departs.

45 46. A method of validating a reservation as defined in claim 46, further comprising the steps of:

40 45 creating in the central data bank an airline flight record which identifies all individuals holding reservations for a particular airline flight, said airline flight record further including an indication whether an individual listed for the

particular airline flight has checked baggage for the flight and an indication whether said individual has boarded the flight; and updating said airline flight record when said central data bank receives information that an individual has checked baggage and when that individual has boarded the airline flight.

5 48. A method of validating a reservation as defined in claim 20, further including the steps of:

10 reading passenger identification indicia on said boarding pass at a gate for said airline flight as said individual is boarding the flight; and

15 communicating said passenger identification indicia read from said boarding pass to said central data bank to store information indicating that said individual has boarded the flight.

20 49. A method of validating a reservation as defined in claim 48, wherein said passenger identification indicia appears on said boarding pass as printed matter and is read by an optical reader.

25 50. A method of validating a reservation as defined in claim 48, wherein said passenger identification indicia appears on said boarding pass as a bar code which is read by a bar code reader.

51. A method of validating a reservation as defined in claim 48, wherein said passenger identification indicia is magnetically stored on said boarding pass and is read by a magnetic reader.

25 52. A method of validating a reservation as defined in claim 48, wherein said passenger identification indicia is the name of the individual.

30 53. A method of validating a reservation as defined in claim 48, wherein said passenger identification indicia is a passenger identification number.

35 54. A method of validating a reservation as defined in claim 48, further including the steps of:

storing information in the central data bank indicating that the individual has checked baggage to be carried by the particular airline flight when the individual checks baggage at the airline

325  
15  
20  
25

terminal prior to boarding the airline flight; and

5 comparing the information in the central data bank which identifies individuals who have checked baggage for the particular airline flight with information in the central data bank which identifies individuals that have boarded the particular airline flight to determine whether any individual who has checked baggage has not boarded, before the particular airline flight departs.

10 55. A method of validating a reservation as defined in claim 48, wherein a passenger record in said central data bank also includes frequent flier information, for individuals who are a member of an airline frequent flier program, including a current record of frequent flier miles accumulated by the individual, and further including the step of updating the record of accumulated frequent flier miles in the passenger record of an individual when the individual boards an airline flight, as indicated by passenger identification indicia read from a boarding pass at the gate of a flight and communicated to said central data bank.

20 56. A method of validating a reservation as defined in claim 21, wherein said passenger record further includes message information representing a message to a passenger from a third party, and further including the step of communicating a message from a passenger record to a remote computer terminal at which a personal identification card has been read to access said passenger record.

25 57. A method of validating a reservation as defined in claim 56, wherein a message received at a remote computer terminal is displayed on a display screen.

30 58. A method of validating a reservation as defined in claim 56, wherein a message received at a remote computer terminal is printed by a printer.

59. A method of validating a reservation as defined in claim 56, wherein said message is stored in at least one of the reservation fields of said passenger record.

35 60. A method for validating a reservation for an airline flight, in order to eliminate the need for paper tickets, said method comprising the steps of:

making a reservation for a particular airline flight for a particular individual who has a reusable personal identification card having stored thereon identification information corresponding to the individual but no specific reservation or

5 airline flight information;

storing reservation data, which identifies the individual and the particular airline flight for which the reservation has been made, in a reservation data storage area of a central data bank;

10 reading the personal identification card of the individual at a selected location in an airline terminal to verify the reservation for the particular airline flight, by accessing the reservation data stored in the central data bank, and effect automatic validation at the selected location to permit the individual to board the airline flight without requiring a paper ticket; and

15 issuing a boarding pass to the individual to allow the individual to board the airline flight without presenting an airline ticket after the personal identification card is read and the reservation has been verified.

20 61. A method of validating a reservation as defined in claim 60, wherein said personal identification card has a picture of the individual thereon.

25 62. A method of validating a reservation as defined in claim 60, wherein said personal identification card has a first magnetic stripe on which said identification information corresponding to the individual is stored, and a second magnetic stripe on which credit account information for a credit account of the individual is stored.

30 63. A method of validating a reservation as defined in claim 60, wherein said personal identification card has printed on the back thereof governmental regulations and liability information as required of Warsaw Pact countries.

35 64. A method of validating a reservation as defined in claim 60, wherein said personal identification card is an airline card which is issued by an airline to allow a passenger to access the airline central data bank.

65. A method of validating a reservation as defined in claim 60, wherein said personal identification card is a bank-type credit card.

66. A method of validating a reservation as defined in claim 60, wherein said personal identification card is a card issued by an airline and has a first magnetic stripe on which said identification information corresponding to the individual is stored and a second magnetic stripe on which credit account information for a credit account of the individual is stored.

67. A method of validating a reservation for an airline flight, in order to eliminate the need for paper tickets, said method comprising the steps of:

making a reservation for a particular airline flight for a particular individual through a travel agent without either the travel agent or the airline issuing an airline ticket to the individual;

receiving from the travel agent payment for the airline flight on behalf of the individual;

crediting an account of the travel agent by an amount equal to a predetermined commission as soon as payment has been received on behalf of the individual;

storing reservation data, which identifies the individual and the particular airline flight for which the reservation has been made, in a reservation data storage area of a central data bank.

transmitting personal identification information, which is obtained from the individual at a selected location of an airline terminal, to the central data bank, to verify the reservation for the particular airline flight, by accessing the reservation data stored in the central data bank, and to effect automatic validation at the selected location to permit the individual to board the airline flight without requiring an airline ticket; and

issuing a boarding pass to the individual to allow the individual to board the airline flight without presenting an airline ticket after the personal identification information has been received from the selected location and the reservation has been verified;

whereby access to airline flights can be effected without the need for issuing an airline ticket to the individual.

68. A method of validating a reservation for an airline flight, in order to eliminate the need for paper tickets, said method comprising the steps of:

5 making a reservation for a particular airline flight for a particular individual who has a reusable personal identification card having stored thereon identification information corresponding to the individual but no specific reservation or 10 airline flight information;

15 storing reservation data, which identifies the individual and the particular airline flight for which the reservation has been made, in a reservation data storage area of a central data bank, including creating in the central data bank a passenger record for an individual who makes a reservation for an airline flight, said passenger record including the name of the individual, graphic data identifying the individual and reservation fields each relating to a respective flight for which said individual has made a flight reservation, each reservation field including information indicating a flight number, a flight departure date, a flight departure time, and a gate number for the flight ;

20 reading the personal identification card of the individual at a selected location in an airline terminal to verify the reservation for the particular airline flight, by accessing graphic data and reservation data stored in a passenger record in the central data bank, and to verify the identity of the individual who presents the card on the basis of the accessed graphic data, thereby to effect automatic validation at the selected location to permit the individual to board the airline 25 flight without requiring a paper ticket; and

30 issuing a boarding pass to the individual to allow the individual to board the airline flight without presenting an airline ticket after the personal identification card is read and the reservation has been verified.

35 69. A method of validating a reservation as defined in claim 68, wherein said graphic data represents a photo of said

individual, and further including the step of displaying the graphic data at the selected location.

70. A method of validating a reservation as defined in claim 69, wherein said personal identification card has a picture of the individual thereon.

71. A method of validating a reservation as defined in claim 68, wherein said graphic data is fingerprint identifying data of said individual, and further including the step of comparing the received graphic data with a fingerprint of the individual at the selected location.

72. A method of validating a reservation as defined in claim 68, wherein said graphic data is retina scan identifying data of said individual, and further including the steps of scanning the retina of the individual and comparing the received graphic data with data obtained by scanning the retina of the individual.

73. An airline reservation and authorization system for making a reservation for a particular individual for a particular flight and for allowing said individual to board said particular flight and to access services and purchase goods on said flight using only personal identification information, and without issuing an airline ticket to said individual, said system comprising:

25 a central storage for storing reservation data concerning a predetermined flight and personal information which relates a particular individual, who has made a reservation for the predetermined flight, to the stored reservation data;

30 an identification card for accessing reservation data from said central storage, said card comprising storage means for storing information personal to an individual to identify that individual and not information concerning an airline flight for which the individual may make a reservation;

35 communication units located at sites remote from said central storage at which reservation information may be accessed by airline personnel from said central storage, said communication units each comprising means for providing a telecommunication

connection with said central storage to verify reservation information on site and an identification card reader for reading the magnetic means on an identification card to identify an individual to the central storage, which central storage includes means responsive to personal information received from a remote site via said telecommunication means for verifying a reservation and authorizing the identified individual to board the airline flight without requiring the individual to present an airline ticket; and

an automatic teller machine at a publicly accessible location for providing information to an individual relating to an airline flight for which said individual has a reservation, said automatic teller machine comprising a card reader, a display terminal, a telecommunication unit responsive to personal information read from an identification card for accessing flight information in said central storage relating to a flight for which the card holder has a reservation to verify that reservation and for displaying said flight information, and means for issuing a boarding pass to said individual when said reservation has been verified.

74. An airline reservation and authorization system as defined in claim 73, wherein said central storage stores frequent flier information, for individuals who are a member of an airline frequent flier program, including a record of frequent flier miles accumulated by each individual.

75. An airline reservation and authorization system as defined in claim 74, wherein at least one communication unit is located on an airplane, so that airline personnel on the airplane can access said central storage using an identification card of a passenger to transfer to said central storage a request to debit the record of frequent flier miles of said passenger in payment for goods or services offered to said passenger by the airline.

76. An airline reservation and authorization system as defined in claim 74, further including a remote computer terminal provided at a passenger seat on an airplane for use by a passenger, said remote computer terminal including a card reader

for reading personal information from an identification card of a passenger and a wire-less communication unit for sending personal information read from an identification card to access said central storage to debit the frequent flier miles of the passenger for payment of services offered to said passenger by the airline.

77. An airline reservation and authorization system as defined in claim 73, wherein said publicly accessible location of said automatic teller machine is in an airline terminal.

78. An airline reservation and authorization system as defined in claim 73, wherein said publicly accessible location of said automatic teller machine is in a hotel.

79. An airline reservation and authorization system as defined in claim 73, wherein said publicly accessible location of said automatic teller machine is in a business office building.

80. An airline reservation and authorization system as defined in claim 73, wherein said automatic teller machine includes a fingerprint identification scanner.

81. An airline reservation and authorization system as defined in claim 73, wherein said automatic teller machine includes a retina scan detector.

82. An airline reservation and authorization system as defined in claim 73, wherein said communication units include a bar code reader.

25

30

35